REMARKS

Upon entry of this Amendment, claims 14-22 and 25-35 are pending and under current examination. For the reasons presented herein, Applicants traverse the rejections set forth in the Office Action[1], wherein the Examiner:

(a) objected to claims 21 and 22 as being dependent upon a rejected base claim, but indicated that they would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim;

(b) rejected claims 23-26 under 35 U.S.C. § 101;

(c) rejected claims 14, 23, and 24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,689,616 to Li ("Li") in view of U.S. Patent No. 5,924,065 to Eberman *et al.* ("Eberman");

(d) rejected claims 15-17 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Eberman as applied to claim 14, and further in view of U.S. Patent No. 4,379,949 to Chen *et al.* ("Chen");

(e) rejected claims 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Eberman and Chen as applied to claim 15, and further in view of U.S. Patent No. 6,064,958 to Takahashi *et al.* ("Takahashi");

(f) rejected claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Eberman and Chen as applied to claim 15, and further in view of U.S. Patent No. 6,801,895 to Huang *et al.* ("Huang"); and

(g) rejected claim 26 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Eberman and Chen as applied to claim 25, and further in view of U.S. Patent No. 6,118,392 to Levine ("Levine").

Claim Amendments:

Applicants have cancelled claims 23 and 24 without prejudice or disclaimer of their subject matter, amended claims 14, 15, 19-21, and 25, and added new claims 27-35. Claim amendments have been made to improve clarity, provide proper antecedent basis, and to address

[1] The Office Action contains statements characterizing the related art and the claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

the 35 U.S.C. § 101 rejection. New claims 27-35 are based on claims 14-22 and now-cancelled claims 23 and 24.

Claim Objection:

Applicants acknowledge with appreciation the Examiner's indication that claims 21 and 22 are drawn to allowable subject matter. For the reasons discussed in this paper, however, Applicants respectfully decline to amend the corresponding base claim to include the elements of one or both of claims 21 and 22.

Rejection of Claims 23-26 under 35 U.S.C. § 101:

The Examiner alleges that claims 23-26 are hybrid claims and directed to non-statutory subject matter. *See* Office Action, p. 2. In response to this rejection, and without acceding to the Examiner's allegations, Applicants have cancelled claims 23 and 24, and replaced them with new claims 27-35. In particular, new claim 27 contains elements of claim 14, and new dependent claims 28-35 correspond to claims 15-22, respectively. Further, Applicants have amended claim 25 to delete reference to claims 14-22, thereby rendering it solely a system claim. Applicants submit that these amendments overcome the 35 U.S.C. § 101 rejection of claims 23-26, and accordingly respectfully request its withdrawal.

Rejection of Claims 14, 23, and 24 under 35 U.S.C. § 103(a):

Applicants request reconsideration and withdrawal of the rejection of claims 14, 23, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Eberman. The rejection of claims 23 and 24 has been rendered moot by the cancellation of these claims.

The Examiner has not properly resolved the *Graham* factual inquiries, the proper resolution of which is the requirement for establishing a framework for an objective obviousness analysis. *See* M.P.E.P. § 2141(II), citing to *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ

459 (1966), as reiterated by the U.S. Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, 82 USPQ2d 1385 (2007). In particular, the Examiner has not properly determined the scope and content of the prior art, at least because he incorrectly interpreted the content of Li. Specifically, Li does not teach what the Examiner attributes to Li.

Moreover, the Examiner's arguments do not provide an appropriate supporting rationale to support his conclusion of obviousness regarding at least independent claim 14 in light of the decision by the Supreme Court in *KSR* that would enable "prompt resolution of issues pertinent to patentability." *See* M.P.E.P. § 2141(III). It appears that the Examiner attempted to rely on a rationale that there exists "[s]ome teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention." M.P.E.P. § 2143. *See also* M.P.E.P. § 2143(G). The Examiner improperly applied this rationale, at least because the alleged motivation to combine Li with Eberman is based on mere conclusory statements, *e.g.*, "[to provide] a speech processing system where clean speech signals can naturally be represented" (Office Action, p. 4), and on an incorrect characterization of the cited references as discussed above with respect to the *Graham* factual inquiries.

Applicants note that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." M.P.E.P. § 2143.01(IV) (citations to *KSR* and *In re Kahn* omitted). The Examiner's conclusory statements along with the incorrect characterization of the cited prior art references undermines the Examiner's allegations and clearly demonstrates nonobviousness of the claimed invention.

None of the cited references, whether taken alone or in combination, teaches or suggests each and every element of Applicants' independent claim 14. Moreover, one of ordinary skill in the art at the time of the present invention would not have been motivated to modify Li with Eberman to produce the claimed invention.

While the Examiner acknowledges that "Li does not specifically disclose likelihoods for recognizing speech" (Office Action, p. 4), Applicants point out that Li also does not disclose Applicants' claimed method of executing a neural network that comprises, in part, "selectively skipping a run of the neural network in correspondence to at least one frame between said non-consecutive frames; and calculating [a] distance as a distance between output likelihoods of said neural network," as recited in claim 14. Thus, the Examiner has not properly determined the scope and content of Li, at least because he incorrectly interpreted its content to include this element of claim 14.

Instead, Li simply discloses "two well-known encoding techniques" for encoding syllabic features. *See* Li, col. 6, lines 56-63. The two well-known encoding techniques disclosed in Li are variable frame encoding and arc-length encoding. *See Id.* This is clearly different from Applicants' claimed "selectively skipping a run of the neural network in correspondence to at least one frame between said non-consecutive frames," as recited in claim 14.

The Examiner then cites Eberman and alleges "[i]t would have been obvious ... to modify ... Li, and use likelihoods as taught by Eberman." Office Action, p. 4. Eberman, however, does not cure the deficiencies of Li. For example, Eberman teaches distances representing likelihoods that a first vector resembles a corrected vector. *See* Eberman, col. 4, lines 17-21. According to the Examiner, it would have been obvious to incorporate the likelihoods in Eberman into Li in order to provide "a speech processing system where clean

speech signals can naturally be represented." Office Action, p. 4. However, it is not clear whether or how the probabilities in Eberman could be used in conjunction with the variable frame encoding and the arc-length encoding disclosed in Li. Furthermore, even if Li and Eberman could be combined, the combination would still not result in Applicants' claimed method of executing a neural network that comprises, in part, "selectively skipping a run of the neural network in correspondence to at least one frame between said non-consecutive frames; and calculating [a] distance as a distance between output likelihoods of said neural network," as recited in claim 14.

In view of the reasoning presented above, Applicants submit that claim 14 is not obvious over Li in view of Eberman, at least because the Examiner has not properly resolved the *Graham* factual inquiries, and has not provided an appropriate supporting rationale to support his conclusion of obviousness. *See* M.P.E.P. § 2141(II) and (III). Moreover, the Examiner has not shown that the results of combining Li with Eberman would have been predictable. *See* M.P.E.P. § 2143.01(III) ("[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (citation to *KSR* omitted)). The reasoning presented above disproves the Examiner's allegations and clearly demonstrates nonobviousness of the claimed invention. Independent claim 14 should therefore be allowable, and Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection.

Remaining 35 U.S.C. § 103(a) Rejections of Claims 15-20, 25, and 26:

Applicants request reconsideration and withdrawal of the remaining rejections of claims 15-20, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Eberman, and further in view of one or more of Chen, Takahashi, Huang, and Levine.

As discussed in the previous section, Li in view of Eberman does not render obvious Applicants' independent claim 14. Independent claim 25, while of different scope, contains recitations similar to those in claim 14, and should be allowable for the same reasons as claim 14. The additional cited references, Chen, Takahashi, Huang, and Levine, taken alone or in combination with Li or Eberman, also fail to disclose or suggest at least Applicants' claimed method of executing a neural network that comprises, in part, "selectively skipping a run of the neural network in correspondence to at least one frame between said non-consecutive frames; and calculating [a] distance as a distance between output likelihoods of said neural network," as recited in claim 14. These references thus fail to cure the deficiencies of Li and Eberman previously discussed.

For at least the above reasons, Applicants' dependent claims 15-20, 25, and 26 should therefore be allowable. Applicants therefore respectfully request withdrawal of the 35 U.S.C. § 103(a) rejections.

New Claims 27-35:

New claims 27-35 are based on claims 14-22 and now-cancelled claims 23 and 24. Independent claim 27, while of different scope, contains recitations similar to those in claim 14 and should also be allowable, along with dependent claims 28-35.

Conclusion:

Applicants request reconsideration of the application and withdrawal of the rejections. Pending claims 14-22 and 25-35 are in condition for allowance, and Applicants request a favorable action.

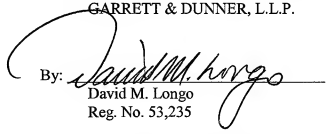
If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Dated: June 13, 2008

By: 

David M. Longo
Reg. No. 53,235

/direct telephone: (571) 203-2763/